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SEPTEMBER 29.

Mr. J. H. REDFIELD in the chair.

Twenty-five persons present.

OCTOBER 5.

Mr. GEO. W. TRYON, JR., in the chair.

Twenty-four persons present.

A paper entitled "Attack and Defence as Agents in Animal Evolution," by Charles Morris, was presented for publication.

OCTOBER 13.

The President, Dr. LEIDY, in the chair.

Thirty-four persons present.

Notes on Cactaceæ.—Elastic Fruit in Mamillaria.—At the meeting of the Botanical Section of the Academy, held on the 12th inst., Mr. MEEHAN referred to his former observations on the sudden growth of the fruit of some species of cactaceæ, indicating that it was not a growth before maturity, but an elastic projection of a fruit already mature. Since that time he had been able to note in *Mamillaria gladiata*, *M. recurva*, and some other Mexican species, in which there was only the apex of the red fruit visible between the mamma over night, a full elongation to the length of an inch by 9 A. M. the next day. They were clear cases of the elongation of the fruit after maturity and not a growth.

The flowers of *Opuntia Rafinesqui* had very irritable stamens when the flowers were fully expanded under a bright sun. Some echinocacti had stamens irritable in a less degree, but in *Echinocactus erinaceus* the stamens were quite as irritable as in the *Opuntia* noted.

On the Flora of Martha's Vineyard and Nantucket.—At the same meeting of the Botanical Section Mr. REDFIELD spoke of the topographical features of Martha's Vineyard and Nantucket, in connection with the flora of those islands. The northern portion of the island of Martha's Vineyard rises into rounded hills of considerable elevation, composed of gravelly drift, strewn occasionally with large boulders. They are evidently

of glacial origin. The more central portion consists of level plains of gravel, covered with oaks, mostly *Quercus obtusiloba*. The general character of the flora is much like that found on the summit of the divides in southern New Jersey, though much more limited as to species. Farther south, extensive ponds, both of fresh and salt water, introduce their characteristic vegetation. In Nantucket he had found the gravelly hills of much less height, the greater portion of the island consisting in fact of treeless plains—one extensive grove of *Pinus rigida* exists in the central portion of the island, and is known to have been planted. The plains alluded to were many years ago occupied as sheep pastures. But of late years this has been prohibited, and it is said that since then there has been a great change in the character of the vegetation. The most characteristic plant of these plains seemed to be *Arctostaphylos uva-ursi*, which grows there in greater profusion than he had ever seen it. The two species of *Hudsonia* abound, the *H. ericoides* being seen everywhere, and less frequently the more bluish-green tufts of *H. tomentosa*. *Polygala polygama*, *Myrica cerifera* and various *Vaccinæ* abound. He saw many large patches of *Corema Conradii*, the existence of which in Nantucket had first been made known by Mrs. Owen of Springfield, Mass. But the most interesting feature is the existence here of three species of heath, possibly indigenous. Mrs. Owen, who published a preliminary catalogue of the Nantucket flora a few years ago, records *Calluna vulgaris* and *Erica cinerea* as found upon the island. The first of these had long been known to occur at Tewksbury, Mass., and there had been some question as to whether its presence there was due to human agency. Its subsequent discovery in Nova Scotia and Newfoundland had seemed to strengthen the idea of its indigenous character. Mr. R. did not see the locality of *Calluna vulgaris*, but had the privilege of seeing that of the *Erica cinerea*. This plant had been known and watched for 10 or 12 years, and is evidently an old one. It grows in the open common—far away from the town—and there is nothing about its surroundings to indicate human introduction. It covers only a space of eight inches by ten.

Since Mr. Redfield's visit the third species *Erica tetralix* had been discovered in a locality very distant from that of *E. cinerea*, but under circumstances which favor the idea of its accidental introduction in connection with the importation of foreign trees. But there are said to be seven or eight of the plants all thriving, large and bushy.

OCTOBER 20.

The President, Dr. LEIDY, in the chair.

Twenty-eight persons present.